

INITIAL STUDY

Project Site: A18 Pond Management Plan

Prepared by:

City of San Jose
801 N. First Street Rm. 400
San Jose, CA 95110

This Initial Study has been prepared in compliance with the California Environmental Quality Act (CEQA) and the CEQA Guidelines.

December, 2004

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LIST OF ATTACHMENTS

Detailed Project Description
Environmental Setting

Technical Reports:

Salinity/Bay Shrimp Attachment: Evaluation of the Potential for Salinity Impacts on Bay Shrimp Associated with Circulation of Saline Pond Water From Pond A18. Steve Hansen, S.R. Hansen & Associates

Salmonid Attachment: Evaluation of the Potential for Impacts on Salmonid Migration Associated with Circulation of Saline Pond Water from Pond A18, Steve Hansen, S.R. Hansen & Associates

Waterbird Attachment: Avian Community Study at Pond A18, WRA, Inc.

Dissolved Oxygen Attachment: Evaluation of the Potential for Reductions in Dissolved Oxygen Associated with Circulation of Saline Water From Pond A18. Steve Hansen, S.R. Hansen & Associates

Heavy Metal Attachment: Evaluation of the Potential for Impacts to Aquatic Life due to the Presence of Heavy Metals in the Saline Pond Water Circulated from Pond A18. Steve Hansen, S.R. Hansen & Associates

Sediments Attachment: Characterization of Sediments at Pond A18. Kirk Wheeler, Shaaf & Wheeler Consulting Civil Engineers

**A-18 Pond Management Plan
Environmental Checklist Form**

I. PROJECT INFORMATION

1. **Project title:** A18 Pond Management Plan
2. **Lead agency name and address:** City of San Jose, 801 N. First St. Rm. 400, San Jose, CA 95110
3. **Contact person and phone number:** Akoni Daniels (408) 277-8535
4. **Project location:** The A18 salt pond is located in the South San Francisco Bay Estuary in the City of San Jose, south of Coyote Slough and east of Artesian Slough (See Figure 1).
5. **Project sponsor's name and address:** Cargill Salt, 7220 Central Avenue Newark, California 94560
6. **General plan designation:** Private Open Space
7. **Zoning:** A Agricultural
8. **Description of project:** The project includes operation of the pond, including discharge of waters and circulation of bay water in the pond. Cargill proposes an initial release of brines within the pond to Artesian Slough (Initial Release), followed by circulation of bay water through the pond in sufficient volume to maintain discharge salinities near bay water salinity (Continuous Circulation). It is expected that the initial release would occur over approximately three months¹ while salinities drop and bay water is circulated through the pond, after which the pond would be operated for continuous circulation. The pond would be operated to limit salinity discharge levels to a maximum salinity of 44 ppt. The proposed pond operation is based on modeling data and may be modified by adaptive management based on results of wildlife and water quality monitoring data.

¹ Discharge is of three months duration but will not necessarily occur over three consecutive months.

9. **Project Objectives:** The purpose of the A18 Pond Management Plan (PMP) project is to circulate water through the South Bay salt pond A18 in a manner which meets water quality standards in the adjacent bay and sloughs and to avoid creation of a seasonal pond once the Initial Stewardship Plan² (ISP ponds) results in severing the connection with adjacent ponds. The objectives of the project are to: 1) cease salt production in Pond A18; 2) circulate bay water through the pond and introduce tidal hydrology to the pond; 3) minimize pond management costs; and 4) meet all regulatory requirements, especially discharge requirements to meet water quality standards in the South Bay.
10. **Surrounding land uses and environmental setting:** The project is located in the former Alviso complex of the Cargill Salt production facilities. It is bordered by Coyote Creek and Coyote Slough to the north, Artesian Slough and ponds A16 and A17 to the west, San Jose/Santa Clara Water Pollution Control Plant (WPCP) to the south and BFI's Newby Landfill to the east. *Scirpus* dominated marsh lines the banks of Coyote Slough and Artesian Slough. See Figure 2.
11. **Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.):** Regional Water Quality Control Board Waste Discharge Permit.

I.I PROJECT OVERVIEW

Pond A18 is a 856-acre salt pond located in the former Alviso complex of the Cargill Salt production facilities (Figure 1). It is bordered by Coyote Slough to the north, Artesian Slough and ponds A16 and A17 to the west, the Zanker Road landfill and San Jose/Santa Clara Water Pollution Control Plant (WPCP) facilities to the south and BFI's Newby Island landfill to the east (Figure 2).

Through implementation of the A18 Pond Management Plan (PMP), Cargill proposes an initial release of brines within the pond to Artesian Slough (Initial Release), followed by circulation of bay water through the pond in sufficient volume to maintain discharge salinities near bay water salinity (Continuous Circulation). It is expected that the initial release would occur over approximately three months while salinities drop as bay water is circulated through the pond, after which the pond would be operated for continuous circulation. Continuous circulation allows salt production to stop and prevents creation of a seasonal pond once Initial Stewardship Plan (ISP ponds) result in severing the connection with adjacent ponds.

² ISP is the federal/state interim management program for the salt ponds sold by Cargill. It involves circulation of bay water within these formerly closed ponds.

The goals of the A18 Pond Management Plan are to:

- Cease salt production in pond A18.
- Circulate bay water through the pond and introduce tidal hydrology to the pond.
- Minimize pond management costs.
- Meet all regulatory requirements; especially discharge requirements to meet water quality standards in the South Bay.

Context for the A18 Pond Management Plan

Pond A18 has historically been operated in conjunction with the other salt ponds in the system for salt production through natural evaporation of bay water. Bay water was brought in to the system through A1 and supplemental intakes and moved through the salt pond system towards the Newark plant site. As the bay water moves through the ponds, salinity increases as water evaporates. A18 has operated as part of the Alviso Complex of salt ponds; brine has historically been transferred to A18 from pond A17 through a siphon underneath Artesian Slough and then transferred to pond A19 via another siphon underneath Coyote Slough. Two existing structures on Artesian Slough will be used for the discharge.

The remainder of the salt ponds in the Alviso complex, including A17 and A19, have been sold to the U.S. Fish & Wildlife Service (FWS) and will be operated under an Initial Stewardship Plan (ISP), in which bay water will be circulated through the ponds and discharged to the Bay in a manner similar to the A18 PMP. FWS (and California Department of Fish & Game (DFG), as owners of the Baumberg salt ponds) submitted a separate Report of Waste Discharge (ROWD) for the ISP operation of the surrounding ponds (permit R2-2004-0018, issued March 17, 2004). Once the contents of the surrounding ponds owned by FWS are discharged, there will be no hydrologic connection between pond A18 and the remainder of the Cargill Salt pond system.

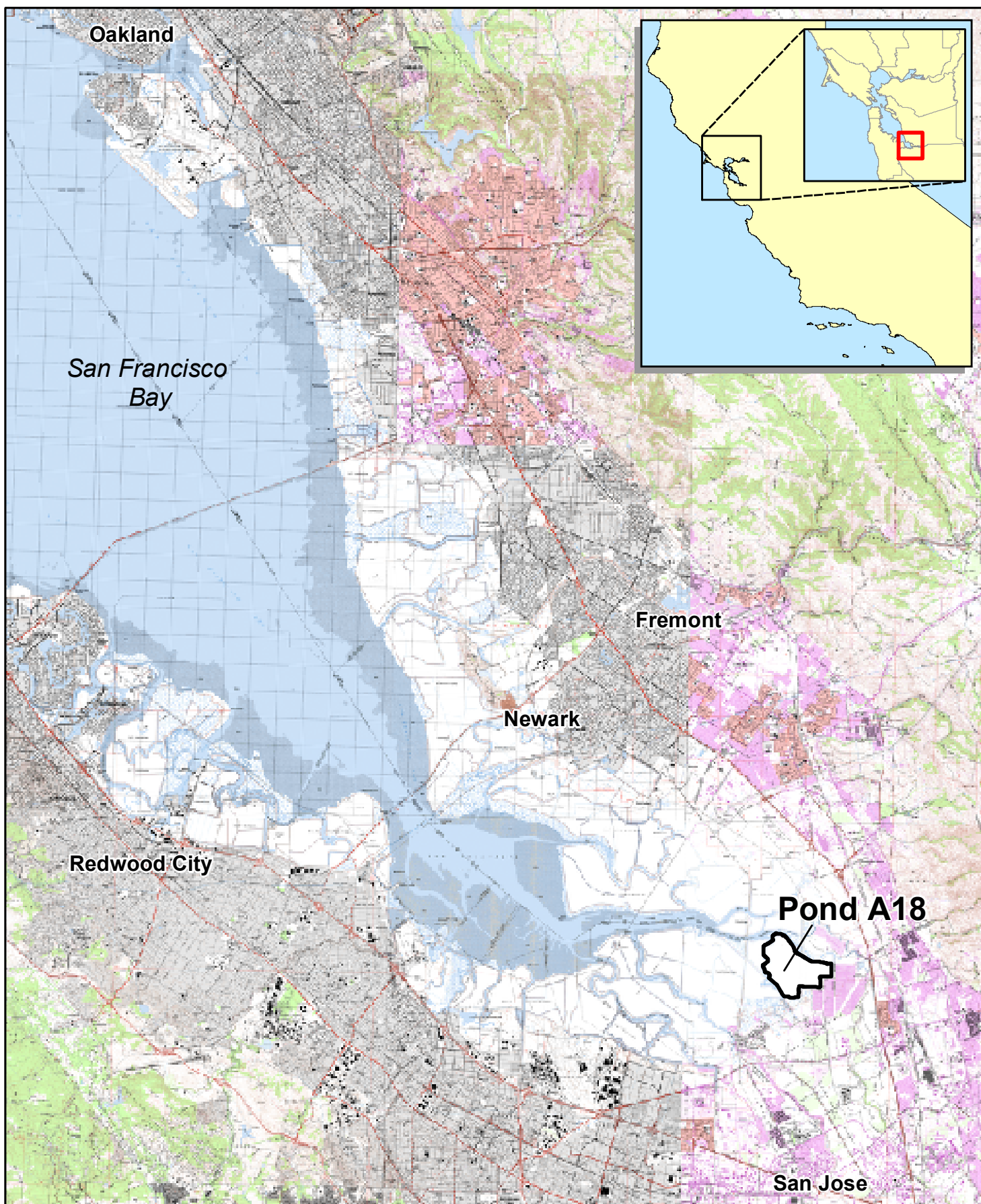


Figure 1. Regional Map Showing the Location of Pond A18 in South San Francisco Bay Area

SCALE
3 1.5 0 Miles
1 inch equals 3 miles
1:190,080



Wetlands Research Associates, Inc.

**Pond A18 Management Project
San Jose, California**

Date: November 2004
Map By: Gabre Olson
Base map: USGS Topo Quad Mosaic: 0 and 301.sld
Filepath: I:\Acad2000 files\14020\gis\Arcmap\Figure1_LocationMap.mxd



Wetlands Research Associates, Inc.

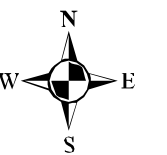
2169-G East Francisco Blvd.
San Rafael, CA 94901
(415) 454-8868 Phone
(415) 454-0129 Fax

Pond A18 Management Project

San Jose, California

Figure 2.

**Aerial Photo Depicting
Pond A18 and
Surrounding Land Use
Features**



0 900 1,800 Feet

**San Jose / Santa Clara Water
Pollution Control Plan (WPCP)**

Date: November 2004
Basemap: TRS Airphotos 2000
Map by: GwO
File: I:\Acad 2000\14020\GIS\
ArcMap\Figure2_pondA18.mxd

Description of the Proposed Pond Management Plan

The proposed Pond Management Plan will intake bay water through the north culvert structure from Artesian Slough near Coyote Slough, circulate it through pond A18, and discharge through the south culvert structure into Artesian Slough near the San Jose/Santa Clara WPCP weir. Both structures have control gates to allow inflow and/or outflow, so it is possible to adaptively manage the pond circulation, either during the initial release or the continuous circulation period.

The initial release period involves the release of brines from within A18 pond. During the initial release period, the pond salinity will be reduced to levels similar to the salinity of the Bay. The pond salinity in Pond A18 varies from year to year and seasonally within the year, and has ranged from 100 to 200 ppt in the past. A maximum initial release salinity of 135 ppt is proposed, and has been used to evaluate potential water quality effect in the receiving waters. The maximum initial release salinity provides an upper bound for the initial release conditions for the discharge permit and CEQA evaluation.

Initial Release

The proposed initial release from Pond A18 would begin in March 2005. The intake and discharge structures are ready for use. The initial release could physically occur at any time. March was selected to provide sufficient time to complete the permit process for the discharge, and to coincide with the March/April time period during which the bay shrimp are normally not present in the South Bay and sloughs. Also, the ambient salinity in the bay and sloughs are normally lower in the early spring than later in the year, which would reduce the potential for high salinity in the receiving waters during the initial release.

The RWQCB discharge permit for the FWS ISP operation is for an April initial release for the discharges at A14 into Coyote Slough and A16 to Artesian Slough. The initial releases for these systems are scheduled for April 2005. Construction for the required structures has started, and is scheduled for completion in March 2005.

The initial release from A18 would require approximately three months to lower the salinity in the pond from the proposed maximum of 125 ppt down to 44 ppt. The A18 initial release in April could add to the salinity in Artesian Slough and Coyote Slough in conjunction with the ISP systems during their planned period of maximum initial release in April. Therefore, the proposed initial release from A18 would be coordinated with FWS discharge activities and cease in April during the first month of the ISP pond initial release. The initial release would restart in May when the salinity discharge from the ISP ponds would be lower. This timing may be adapted according to changes in the proposed ISP discharge timing. The discharge salinity from A18 would reach 44 ppt during June. At that time, the water management structures would be set to allow for continuous circulation such that discharge salinity would not exceed 44ppt.

As an adaptive management option, two initial release alternatives are available for the A18 initial release. Both options would begin in March, stop during April, or during the first month of ISP discharge from Pond A17, and restart the following month.

- **South Initial Release** – The A18 pond is modeled to begin initial discharge in March. Initial modeled pond salinities are based on the maximum salinity of 135 ppt. The initial release operation would intake from lower Artesian Slough near Coyote Slough at the north structure, and discharge in upper Artesian Slough at the south structure.
- **North Initial Release** – The A18 initial release would reverse the proposed PMP continuous circulation flow conditions. The initial release would intake from upper Artesian Slough at the south structure, and discharge to lower Artesian Slough near Coyote Slough at the north structure. The north initial release would discharge closer to Coyote Slough and the Bay and take advantage of lower salinity intake water in Artesian Slough.

The proposed project anticipates a South Initial Release as the preferred option. However, should monitoring show salinity levels are higher than expected in Artesian Slough, a north release could be implemented.

Continuous Circulation

The continuous circulation of bay waters through Pond A18 will commence once the salinity levels at the pond reach 44 ppt. Bay waters will be circulated through the pond in sufficient volume to maintain discharge salinities near Bay water levels and maintain surface elevations close to current levels. Intake and outflows will be managed to achieve an adequate turnover of pond waters throughout the year to reduce excessive buildup of algae and other odor-producing materials and to allow a two-foot freeboard to prevent over-topping of the levees during storm conditions.

The system includes the following structures:

- 2 x 48" gate inlet structure from Artesian Slough near Coyote Slough
- 2 x 48" gate outlet structure to upper Artesian Slough

Normal inspection and maintenance will occur monthly at the intakes and outlets to check that the gates and facilities are intact and operable. Gates will require periodic operation and lubrication. Any damaged or inoperable equipment will be repaired as required. Gates and structures may also require annual cleaning to remove mussels and barnacles.

Water quality elements to be monitored include: dissolved oxygen, pH, salinity, and temperature. Water quality will be monitored in the receiving waters on a monthly basis

from May through October, upstream and downstream from the discharge point. Water quality will be monitored at the discharge point on a continuous basis (using a continuous monitoring device) from May through October. Metals will be monitored on an annual basis at the discharge point.

I.II MONITORING PROGRAM

Purpose of Monitoring

The principal purpose of this monitoring program is to document compliance with waste discharge requirements and prohibitions established by the San Francisco Regional Water Quality Control Board during the Initial Release Phase of the Pond A18 discharge.

Overview of Initial Release Monitoring Plan

Timing of Monitoring Effort – The monitoring effort will occur prior to and during the Initial Release Period of the Pond A18 discharge. As proposed, the Initial Release Period for Pond A18 will be completed during the three month period, March through May of 2005. The duration of the Initial Release will be approximately 8 weeks, with the exact timing during this three month period being influenced by the initial discharges that are planned to occur from the USFWS Ponds A16 and A14. Assuming that USFWS initiates discharge from Ponds A16 and/or A14 in April 2005, the discharge from Pond A18 will begin in March 2005, be suspended in April, and recommence in May 2005.

Possible Discharge Configurations – Two discharge scenarios are possible; differing in the location of the point of discharge from Pond A18 to Artesian Slough. As illustrated in Figure 3, the “South Initial Release” scenario will have water from Artesian Slough flowing through Pond A18 in a north to south direction. The discharge point is located at the head of Artesian Slough near the San Jose/Santa Clara Wastewater Treatment Plant discharge. As illustrated in Figure 4, the “North Initial Release” scenario will have water from Artesian Slough flowing through Pond A18 in a south to north direction. The discharge point is located at the mouth of Artesian Slough near its confluence with Coyote Slough (i.e., at the intake under the “South Initial Release” scenario).

Receiving Water and Benthos Sampling Stations – Since the location of the discharge point is different for each of the two possible discharge configurations, a different array of sampling stations for evaluating receiving water quality and benthic community structure has been selected for each scenario. The locations of these stations are illustrated in Figures 5 and 6.

Sampling and Analytical Methods - Sample collection, storage, and analyses will be performed according to *Standard Methods for the Examination of Water and Wastewater*, 20th Edition, or other methods approved and specified by the Regional

Board. Where appropriate, all analyses will be performed by a laboratory approved for these analyses by the State Department of Health Services (DOHS). All monitoring instruments and equipment will be properly calibrated and maintained to ensure accuracy of measurements.

SPECIFICS OF INITIAL RELEASE MONITORING PLAN

Monitoring for the Initial Release Period will consist of three components. First, measurements will be made in Pond A18, prior to and during the Initial Release Period, to determine the dissolved oxygen (D.O.), pH, temperature, and salinity of the water to be discharged. Second, measurements will be made in the receiving waters (i.e., Artesian Slough and/or Coyote Slough) to determine the D.O., pH, temperature, and salinity of these waters when the Initial Release is occurring. Third, sediment samples will be collected from the receiving water bodies at three time points (i.e., prior to, during, and after the Initial Release Period) to determine benthic community structure. Each of these components is further described below.

Pond A18 Monitoring – Water column monitoring will occur in Pond A18 at least twice per month for two months prior to the initiation of the Initial Release. At least three stations will be monitored during this period (i.e., near the north intake/discharge structure, near the south intake/discharge structure, and at mid-pond). At each location, measurements will be made of D.O., pH, temperature, and salinity. These measurements will be made between 0800 and 1000 hours.

Once the Initial Release begins, the discharge from Pond A18 will be monitored at the discharge point (i.e., before pond water mixes with receiving water) using a continuous monitoring device. Allowance will be given for unforeseen downtime due to equipment failure, fouling or other unplanned logistical difficulties. Measurements will be made of D.O., pH, temperature, and salinity.

Receiving Water Quality Monitoring – The receiving waterbodies will be monitored at four discrete locations from downstream to upstream of the discharge point. The monitoring at each station will occur as close to high tide as is logistically feasible at the following frequency:

1. Approximately one week before initiating discharge,
2. one day after the initiation of discharge,
3. two to four days after the initiation of discharge,
4. six to eight days after the initiation of discharge,
5. then weekly, while discharging, until it is documented that discharge salinity levels are below 44ppt.

At each station, at each of the prescribed times, the water column will be monitored for D.O., pH, temperature, and salinity. In addition, during each monitoring period,

measurements will be made at two depths (i.e., one foot below the water surface and one foot above the bottom) and the stage of the tide will be determined.

Benthos Monitoring - Samples for benthos monitoring will be collected from each of the above specified four stations at a convenient stage of tide at the following frequency:

1. Approximately one week before initiating discharge,
2. 11-17 days after the initiation of discharge,
3. 11-17 days after second sampling step (above),
4. Approximately one month after the completion of the Initial Release Period

At each station, at each of the prescribed times, one grab sample will be collected while the boat is anchored and each of these samples will be analyzed separately to determine the benthic community structure.

STANDARD OBSERVATIONS

During the Initial Release Monitoring Program standard observations will be made during each of the sampling events. These observations will include the following:

At Receiving Water Quality Monitoring Stations:

1. Floating and suspended materials (to include oil, grease, algae, and other macroscopic particulate matter, presence or absence, source, and size of affected area).
2. Discoloration and turbidity: description of color, source, and size of affected area.
3. Odor: presence or absence, characterization, source, distance of travel, and wind direction.
4. Evidence of beneficial water use: presence of water-associated waterfowl or wildlife, fisherpeople, and other recreational activities in the vicinity of the sampling stations.
5. Hydrographic condition
 - Time and height of corrected high and low tides (corrected to nearest NOAA location for the sampling date and time of sample and collection).
 - Depth of water columns and sampling depths.
6. Weather conditions
 - Air temperatures.
 - Wind – direction and estimated velocity.
 - Total precipitation during the previous five days and on the day of observation.

In Pond A18:

1. Floating and suspended material (to include algae, and other macroscopic particulate matter): presence or absence, approximate size and location in pond.
2. Odor: presence or absence, characterization, source, distance of travel and wind direction.

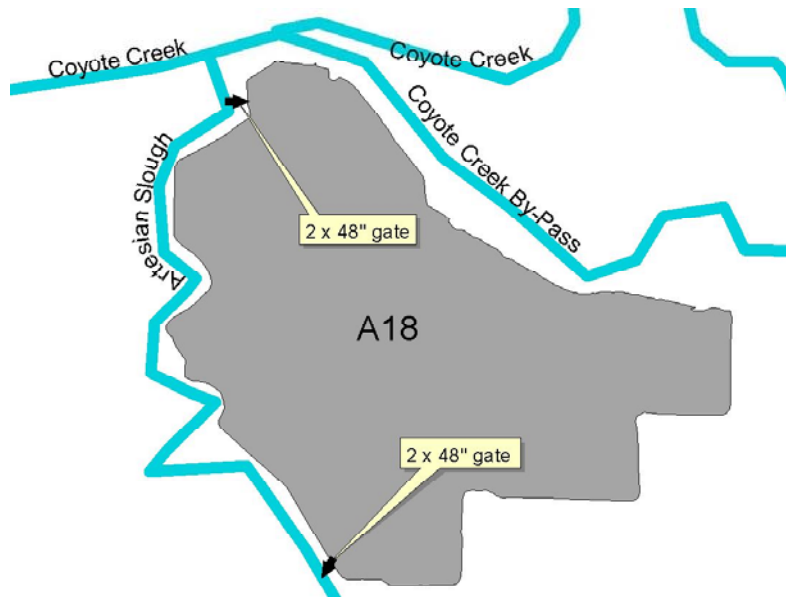


Figure 3. Schematic of “South Initial Release” Scenario for Pond A18

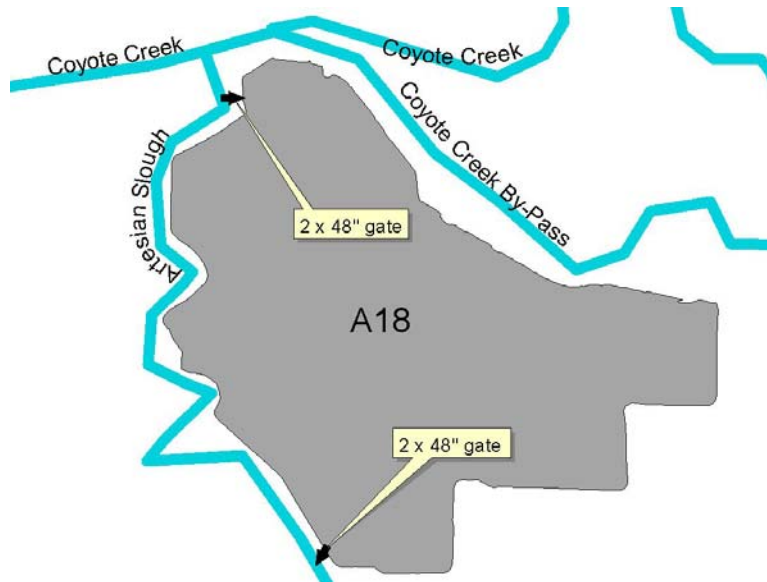


Figure 4. Schematic of “North Initial Release” Scenario for Pond A18

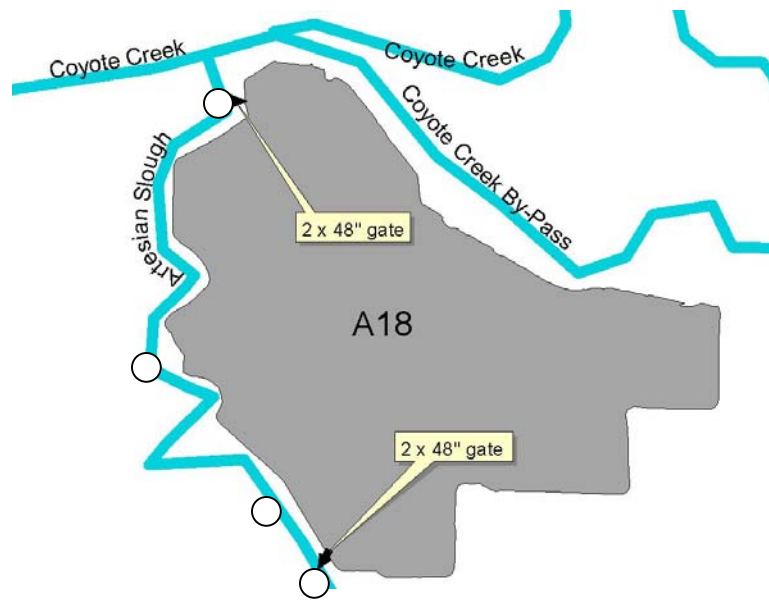


Figure 5. Monitoring Stations for “South Initial Release” Scenario for Water Quality & Benthos

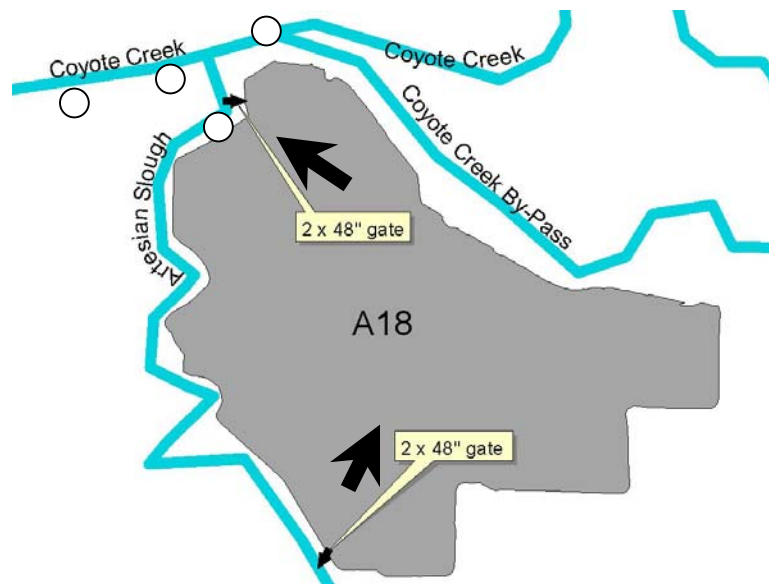


Figure 6. Monitoring Stations for “North Initial Release” Scenario for Water Quality & Benthos

II. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below could be potentially affected by this project. Each of the factors checked are less than significant with mitigation incorporated as described in the Initial Study.

	Aesthetics		Agriculture Resources		Air Quality
X	Biological Resources		Cultural Resources		Geology /Soils
	Hazards & Hazardous Materials	X	Hydrology / Water Quality		Land Use / Planning
	Mineral Resources		Noise		Population / Housing
	Public Services		Recreation		Transportation/Traffic
	Utilities / Service Systems		Mandatory Findings of Significance		

III. DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
X	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

Date

Akoni Danielsen

12/08/2004

Printed Name

Date

IV. EVALUATION OF ENVIRONMENTAL IMPACTS:

<i>Issues</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Information Sources</i>
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I. AESTHETICS – Would the project:

a) Have a substantial adverse effect on a scenic vista?				✓	1, 21,22
No scenic vista is present within the project site. The overall appearance of the marshland adjacent to the pond will remain unchanged by the project.					

<i>Issues</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Information Sources</i>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				✓	1,5,6,21,22
No state scenic highway is present within or adjacent to the project area.					
c) Substantially degrade the existing visual character or quality of the site and its surroundings?				✓	1,21,22
No physical changes are proposed as a result of the project.					
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				✓	1,21,22
No new sources of light are proposed as a result of the project					

FINDINGS: The proposed project would not alter the existing visual character of the site.

MITIGATION MEASURES: None required

II. AGRICULTURE RESOURCES – Would the project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				✓	3,21
No farmland is present within the project site.					
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?			✓		1,3,15
While the project site is zoned for agricultural use, it has been used for commercial salt production and is no longer suitable for agricultural purposes. The project is not subject to a Williamson Act contract.					
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?				✓	3,21
No farmland is within or adjacent to the project site.					

FINDINGS: The project site is zoned for agriculture, but has been used for commercial salt production. There will be no changes in the existing environment which could result in the conversion of farmland to non-agricultural use.

<i>Issues</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Information Sources</i>
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MITIGATION MEASURES: None required.

III. AIR QUALITY – Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?				✓	11
The project will not conflict with Bay Area air quality plans in that the project will not emit criteria pollutants.					
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?				✓	11
The project will not result in the violation of any air quality standard or contribute to an existing or project air quality violation. No air pollutants or emissions will be generated as a result of this project.					
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?				✓	11
No air pollutants will be generated by the implementation of this project; nor will any long-term (operational) air pollutants be generated by the project. No criteria pollutants will be emitted by this project. The intake and discharge structures necessary to facilitate the movement of brines through the pond are in place.					
d) Expose sensitive receptors to substantial pollutant concentrations?				✓	1,11
No sensitive receptors, such as hospitals, day care centers, or elder housing facilities, are present near the project site and the project will not emit criteria pollutants.					
e) Create objectionable odors affecting a substantial number of people?		✓			11,21,22,30,32,33
Temporary air quality impacts may occur due to the potential generation of objectionable odors. Objectionable odors generated from salt pond environments may be attributed to two primary sources: exposed pond bottom sediments and biomass accumulation in stagnant waters. Pond bottom sediments may be exposed to the air if a pond is allowed to dry or if depths are very low. These sediments generate odors due to the exposure of anaerobic sediments and decaying algae. Pond waters generate odor when algae and other organisms in the pond accumulate in stagnant areas of the pond. As the algae decompose, hydrogen sulfide gas is produced, generating a strong sulfuric odor.					

FINDINGS: The City of San Jose uses the threshold of significance established by the Bay Area Air Quality Management District (BAAQMD) to assess air quality impacts. Based on the BAAQMD threshold of significance, projects that generate fewer than 2,000 vehicle trips per day are not considered major pollutants and do not require a technical air quality study. The project will not generate an increase in vehicle trips per day.

The project incorporates measures to prevent objectionable odors from occurring, including continuous circulation of bay waters through the pond. Pond conditions creating odors, including stagnant waters and exposed pond bottom sediments, will be avoided.

<i>Issues</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Information Sources</i>
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MITIGATION MEASURES: Objectionable odors created by the project are not expected to occur. However, in order to monitor odor conditions at the pond and identify when odors are generated due to unforeseen circumstances, hydrogen sulfide monitor cards can be placed at the periphery of the pond. Past experience with these cards has proved them to be useful, though not necessarily definitive. These cards turn black when exposed to hydrogen sulfide gas. If hydrogen sulfide gas odors result from biomass decaying in stagnant waters or depths fall to such a level as to expose pond bottoms, circulation will be increased through the pond or water levels raised by closing the outlet gate to eliminate the pond conditions that create objectionable odors.

IV. BIOLOGICAL RESOURCES – Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		✓			8,21,22,23,24,25,26,27,28,30,31,32,33
<p>Listed or Candidate Species A total of 18 special status species are known to occur or have a potential of occurring at Pond A18 or in the surrounding tidal marshes, sloughs and creeks (Environmental Setting Attachment). The majority of these species utilize marsh habitats outside of the pond itself and may utilize the pond levees or waters for foraging and roosting purposes.</p> <p>Seven state and federal listed endangered and threatened species, and eleven federal and/or state (FWS/DFG) Species of Special Concern that are known to occur or have a high potential of occurring at or in the vicinity of Pond A18. These species are:</p> <p>Federal and state listed species salt marsh harvest mouse, <i>Reithrodontomys raviventris</i> California brown pelican, <i>Pelecanus occidentalis californicus</i> California least tern, <i>Sterna antillarum browni</i> California clapper rail, <i>Rallus longirostris obsoletus</i> western snowy plover, <i>Charadrius alexandrius nivosus</i> steelhead-central California coast ESU, <i>Oncorhynchus mykiss irideus</i> Chinook salmon-California coastal ESU, <i>Oncorhynchus tshawytscha</i></p> <p>Federal and/or state species of concern and fully protected species saltmarsh wandering shrew, <i>Sorex vagrans halicoetes</i> double-crested cormorant, <i>Phalacrocorax auritus</i> Barrow's goldeneye, <i>Bucephala islandica</i> northern harrier, <i>Circus cyaneus</i> white-tailed kite, <i>Elanus caeruleus</i> long-billed curlew, <i>Numenius americanus</i> California gull, <i>Larus californicus</i> western burrowing owl, <i>Athene cunicularia hypugea</i> loggerhead shrike, <i>Lanius ludovicianus</i> saltmarsh common yellowthroat, <i>Geothlypis trichas sinuosa</i> Alameda song sparrow, <i>Melospiza melodia pusillula</i></p> <p>These species and their associated habitat requirements were evaluated to determine whether the proposed project would have a significant impact on any of these species (Environmental Setting Attachment).</p>					

<i>Issues</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Information Sources</i>
<p><u>Fish (Salmonids)</u> Chinook salmon and steelhead trout may be present in Coyote Slough during adult and juvenile seasonal migrations. The proposed project could impact migrating salmonids by: 1) interfering with natal signals used by adult salmon to find their spawning grounds; 2) disorientation of adult and juvenile salmonids during up- and downstream migration due to changes in water composition and 3) inadvertent entrainment in intake structures associated with the project. In order to determine if these potential impacts were significant and/or mitigation measures were required, an evaluation of potential salmonid impacts was prepared (Salmonid Attachment).</p> <p><u>Birds (Waterbirds)</u> Waterbird species that potentially roost, nest, or winter at pond A18 may be impacted by habitat modifications that occur as a result of the proposed project. Pond A18 is currently censused once monthly to document waterbird presence and abundance at the pond. Results of this monitoring (Waterbird Attachment) indicate that Pond A18 currently supports shorebird, gull and grebe species that are typical of high-salinity salt ponds such as American avocets, black-necked stilts, California gulls, western gulls, and eared grebes. A reduction in salinity to approximately 44 ppt under continuous circulation conditions will result in a decline in brine shrimp prey for these high-salinity salt pond species but an overall increase in invertebrate species diversity and subsequent foraging opportunities that mimic natural invertebrate populations in the Bay.</p> <p>Avian botulism affects waterfowls and shorebirds, causing muscle paralysis and death after exposure to a neurotoxin produced by the botulinum bacterium. Outbreaks of avian botulism occur after invertebrate kills, when the toxin is taken in by birds feeding directly on invertebrate carcasses that contain the toxin. Warming temperatures and anaerobic conditions in ponds can lead to invertebrate kills, especially when decomposition of algae blooms deplete dissolved oxygen in pond water.</p>					
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?			✓		8,19,21,22, 26,30,33
<p>Tidal marsh, present along the receiving waters adjacent to the project site, is considered a sensitive community by the CDFS. Short-term, controlled discharges of high salinity brines into receiving waters during the Initial Release Period are not expected to effect tidal marsh wetlands in the vicinity of the project site. No riparian habitat or other sensitive natural communities are present within the pond itself.</p>					
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			✓		8,21,22,30, 33
<p>Short-term, controlled discharges of high salinity brines into Artesian Slough may temporarily increase the salinity of the waters inundating tidal marsh wetlands in the vicinity of the discharge point during the Initial Release Period. This temporary increase in salinity is not expected to negatively impact the biological function of these wetlands.</p>					
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			✓		8,21,22, 24,25,26,27, 28,29,30,33

<i>Issues</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Information Sources</i>
<p><u>Invertebrates (Bay Shrimp)</u> The discharge of high salinity brines into Artesian Slough and adjacent waterways during the Initial Release Period will temporarily increase the salinity levels of the receiving waters. This temporary change could impede or repel the movement of benthic organisms making use of the slough or creek. Bay shrimp, a common invertebrate species in South San Francisco Bay and tributaries, may experience temporary decreases in preferred shrimp habitat during the Initial Release Period due to increased salinity levels. An evaluation of loss of preferred shrimp habitat during the Initial Release Period and Continuous Circulation Phase was conducted (Bay Shrimp/Salinity Attachment). Impacts to Bay shrimp were determined to be short-term, primarily due to the seasonal occurrence of Bay shrimp in the receiving waters and absence during the month of March when the first initial release is proposed. Though present in May when the release will be resumed, the increase in salinity will be less. No significant change in shrimp habitat area for the juvenile salinity preference range (May-August) or the adult salinity preference range (September-February) was found under continuous circulation conditions.</p> <p><u>Fish (Salmonids)</u> Chinook salmon and steelhead trout may be present in Coyote Slough during adult and juvenile seasonal migrations. The proposed project could impact migrating salmonids by: 1) interfering with natal signals used by adult salmon to find their spawning grounds; 2) disorientation of adult and juvenile salmonids during up- and downstream migration due to changes in water composition and 3) inadvertent entrainment in intake structures associated with the project. In order to determine if these potential impacts were significant and/or mitigation measures were required, an evaluation of potential salmonid impacts was prepared (Salmonid Attachment).</p> <p>Based on this evaluation, "natal stream" gradients are expected to remain intact as a result of circulation of Bay waters through Pond A18, therefore, the upstream migration of adult steelhead trout and chinook salmon to their spawning grounds in upper Coyote Slough should not be impaired. In addition, adverse impacts to downstream migrating juvenile salmon are expected to be extremely small due to the fact that the intakes to Pond A18 are on Artesian Slough, not Coyote Slough. Very few, if any, juvenile salmonids have the possibility of entrainment in salt pond intake structures and waters from this project.</p>					
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				✓	1,13,21,33
The proposed project is not in conflict with any local policies or ordinances protecting biological resources.					
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				✓	1,8,21,22,33
There are no Habitat Conservation Plans or local conservation plans that include the project area. The proposed project is not in conflict with any local policies or ordinances protecting biological resources.					

FINDINGS:

The project would have a significant impact on aquatic organisms or wetland habitats if it:

- Has the potential to substantially reduce habitat, cause a population to drop below self-sustaining levels, or threaten to eliminate a community;
- Adversely affect any federal or state listed species or candidate species;
- Results in the loss of wetland habitat.

The evaluation of significant impacts focuses on several target species representative of various groups. The results of the significance evaluation indicate that none of the potentially occurring listed or candidate species will be subjected to potentially significant impacts under the proposed project. The

<i>Issues</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Information Sources</i>
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primary habitat values of Pond A18 and the receiving waters are as roosting and foraging grounds for avian and aquatic species. Pond A18 and the receiving waters will continue to provide these habitat values under the proposed project. Species that utilize nearby marsh and upland habitats, such as the salt marsh harvest mouse, California clapper rail, northern harrier and white-tailed kite, will not be subjected to any change in habitat value in their respective habitats.

The upstream migration of adult steelhead trout and chinook salmon to their spawning grounds in upper Coyote Slough will not be impaired. In addition, adverse impacts to downstream migrating juvenile salmon are expected to be extremely small. Very few, if any, juvenile salmonids have the possibility of entrainment in salt pond intake structures and waters from this project.

Impacts to Bay shrimp were determined to be short-term. No significant change in shrimp habitat area for the juvenile salinity preference range (May-August) or the adult salinity preference range (September-February) was found under continuous circulation conditions.

No fill or loss of wetland habitat will occur under the proposed project.

MITIGATION MEASURES: In order to ensure that the discharge and pond water parameters are within the range predicted by the hydrodynamic computer modeling and potential impacts to special status or sensitive species remain less than significant, water quality conditions will be monitored according to a plan approved by the RWQCB. Monitoring of Pond A18 water quality will ensure that any unforeseen changes in pond conditions and discharge are addressed through either closure of tidal gates or altering the release scenario to a north initial release as described in the project description.

Waterbird use of the pond will continue to be monitored to provide data on waterbird use as it relates to changing salinity conditions within the pond and monitor for signs of avian botulism. Avian botulism will be avoided by maintaining water levels or increasing circulation through ponds, keeping salinity at or above sea water concentrations, and disposing of carcasses.

V. CULTURAL RESOURCES – Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?				✓	5,21
There are no known historical resources present within the project area.					
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?				✓	6,21
There are no known archaeological resources present within the project area.					
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				✓	4,6,21
There are no known paleontological or unique geologic resources present within the project area.					
d) Disturb any human remains, including those interred outside of formal cemeteries?				✓	6,21

<i>Issues</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Information Sources</i>
No human remains are known or expected to exist within the project area.					

FINDINGS: No historical or archeological resources exist within the project site, therefore no impacts to historical or cultural resources will result.

MITIGATION MEASURES: None required.

VI. GEOLOGY AND SOILS – Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:					
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				✓	4
No residences, work places, or other structures will be constructed.					
ii) Strong seismic ground shaking?				✓	4
No residences, work places, or other structures will be constructed.					
iii) Seismic-related ground failure, including liquefaction?				✓	4
No residences, work places, or other structures will be constructed.					
iv) Landslides?				✓	4
No residences, work places, or other structures will be constructed.					
b) Result in substantial soil erosion or the loss of topsoil?				✓	4
No loss of topsoil or soil erosion will occur as a result of project implementation					
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			✓		2,4
Unstable soils are known to exist within the project area. The project will not affect long-term soil stability of these soils.					
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building				✓	2,4

<i>Issues</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Information Sources</i>
Code (1994), creating substantial risks to life or property?					
No buildings will be constructed on an expansive soil.					
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				✓	2,4
No waste water requiring the use of septic tanks or alternative waste water disposal systems will be generated as a result of the project.					

FINDINGS: The project is not located within a geologic hazards zone. No structures will be built as a result of this project.

MITIGATION MEASURES: None required.

VII. HAZARDS AND HAZARDOUS MATERIALS – Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				✓	9,18,21,32
No hazardous materials will be used or generated by the project.					
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				✓	9,18,21,32, 34
No hazardous materials will be used or generated by the project.					
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				✓	9,18,21,32, 34
No hazardous materials will be used or generated by the project.					
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				✓	9,18,21
The project site is not a hazardous materials site.					
e) For a project located within an airport				✓	1,15,21,32

<i>Issues</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Information Sources</i>
land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?					
The project area is not within an airport land use plan or within two miles of an airport.					
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				✓	22,32
There is no private airstrip in the vicinity of the project area.					
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				✓	1,16,22,32
The project area is on the fringe of the South San Francisco Bay; no barriers to emergency plans will occur as a result of the project.					
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				✓	22,32
No increased fire hazards will occur as a result of this project. The pond and surrounding marsh lands are not open to the public and are not in the vicinity of urbanized areas or private residences.					

FINDINGS: No hazardous materials will be used or exposed as a result of this project. No public safety hazards will be created as a result of this project.

MITIGATION MEASURES: None required.

VIII. HYDROLOGY AND WATER QUALITY – Would the project:

a) Violate any water quality standards or waste discharge requirements?		✓			12,22,25,26, 29,30,31,32
<p>Dissolved Oxygen: Reductions in dissolved oxygen (DO) could occur if the circulating waters discharging into the receiving waters have a high biological oxygen demand. This could result in depressed DO in sloughs, creeks, and portions of the Bay that could result in anoxic conditions that would adversely impact aquatic life. The water quality standard to maintain is 5.0 mg/l and above. An analysis was completed to evaluate DO conditions under the proposed project (DO Attachment). The results of this analysis indicate that it is unlikely that the discharge of pond water will cause anoxic conditions in the receiving waters. Based on laboratory tests, the oxygen demand associated with the circulated pond water is expected to be primarily due to the presence of algae and, consequently, even a short diurnal light period should be sufficient to raise levels of dissolved oxygen concentrations to levels above 5.0mg/l.</p> <p>Chemical Contaminants: Chemical analysis of Alviso Unit pond water samples conducted for the recent FWS ISP is</p>					

<i>Issues</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Information Sources</i>
<p>valid for Pond A18. The results of chemical analysis of pond water samples, which are considered representative of future discharges, indicate that organic compounds will not be problematic because they are rarely detected and, if detected, occur at very low concentrations that are below known adverse affect levels. For four of five samples, none of the 67 semi-volatile organic compounds included in the analysis were detected. In the fifth sample, 66 of the 67 compounds were not detected and one compound was found in an unquantifiable trace level. Similarly, for three samples analyzed, dioxins and furans were either undetected or present in concentrations below the method calibration limit. These samples are considered representative of all of the salt ponds, including A18.</p> <p>Results of this study indicate that it is unlikely that the discharge of pond water will cause an increase in chemical contaminants in the receiving waters. Pond waters are essentially bay waters that have been concentrated via solar evaporation and therefore, any contaminants that occur in bay water have the potential to occur in the pond discharge. Other possible sources of chemical contaminants in the pond water discharge include desorption from sediments (see below) and atmospheric deposition. The concentrations of contaminants originating from bay water may be either increased (due to concentration, desorption, and deposition) or decreased (due to absorption by sediments, uptake by biota, volatilization, and other processes) prior to and during the proposed project.</p> <p>Sediments: The sediments in the general area of the Alviso ponds have historically been subject to significant sources of contamination from historical mining activities (especially for mercury) in the Coast Range and Guadalupe River watershed. These mining activities resulted in the mobilization of large amounts of mercury-rich sediment into these downstream, wetland areas. Since diking the areas into ponds for salt-making operations, the source of contaminant input into these areas has generally been restricted to what comes in with the intake water, including some suspended sediment.</p> <p>Tetra Tech, Inc. conducted a study of pond sediments at Pond A18 and in nearby sloughs and creeks in 2002 (Results in Sediments Attachment). A total of 14 samples from eight locations at Pond A18 pond sediments were collected and analyzed for pH, sulfate, sulfide, chloride, CAM 17 metals (California Code of Regulations Title 22), and moisture content. A total of 7 sediment samples were collected from Coyote Slough and Artesian Slough were analyzed for CAM 17 metals, VOCs, PAHs, and TPH.</p> <p>Results from this analysis indicated that none of the metals had concentrations in exceedence of hazardous waste criteria for total metal concentrations (Toxic Threshold Limit Concentrations or TTLC under CA Title 26). All samples had metal concentrations that were less than the guidelines for use of sediment as wetland foundation material.</p> <p>Heavy Metals: An evaluation of the discharge of pond water (Heavy Metals Attachment) was conducted to estimate the magnitude of heavy metals potentially present in the pond discharge. The results of this evaluation indicate that 9 of the 10 heavy metals studied (cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, and zinc) are not expected to exceed water quality objectives in the Pond A18 discharge at any time. The tenth metal, arsenic, may occur in the Pond A18 discharge in levels greater than the applicable water quality objective. However, this exceedence, if it occurs, will be limited to the Initial Release Period and will result in only minor elevations in concentrations in limited segments of the receiving waters.</p> <p>Salinity: The saline water circulated from Pond A18 will discharge to Artesian Slough, then flow to Coyote Slough and into the South Bay. Segments of these tributaries and South Bay waters will experience increase in salinity as a result of the discharge.</p> <p>Hydrodynamic modeling for South San Francisco Bay shows no identifiable effects within the Bay for the A18 discharge. The maximum continuous circulation increase is estimated to be less than 1 ppt. in late September. The maximum salinity increase during the Initial Release Period was estimated to be less than 1 ppt for approximately 4 weeks.</p> <p>Hydrodynamic modeling for the creeks and sloughs in the vicinity of A18 during the Initial Release Period shows that the predicted daily average salinity for slough segments near the discharge outlet is in the range of 5 to 20 ppt for approximately 2 weeks during the Initial Release Period. Salinity increases are dependent on the salinity and flow of the discharge and the tidal and hydrological conditions in the slough. The predicted salinity conditions would be comparable to drought conditions in Artesian Slough, but lower than ambient conditions in lower Coyote Creek.</p> <p>Hydrodynamic modeling for the creeks and sloughs in the vicinity of A18 during the Continuous Circulation Period shows that the A18 discharge is estimated to increase daily average slough salinities by 2 to 6 ppt in Artesian Slough,</p>					

<i>Issues</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Information Sources</i>
depending on the discharge flow, slough conditions, and distance from the discharge location. Predicted salinities are with the existing salinity ranges in the sloughs.					
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?				✓	26,32
Groundwater will not be consumed by the project; the project will not interfere with groundwater recharge.					
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?			✓		26,32
The initial short-term release of salt pond brines into Artesian Slough is not expected to alter the existing drainage pattern of the site or area. The subsequent continuous circulation of Bay waters through the pond will not substantially alter the existing drainage pattern of the area.					
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			✓		26,32
The project will not result in a substantial alteration of the existing drainage pattern of waters in the vicinity of the project site.					
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?				✓	7,26,32
No additional sources of runoff will be created by this project.					
f) Otherwise substantially degrade water quality?			✓		22,24,25,26,29,30,31,32
The project will operate under permit conditions set forth and approved by the Regional Water Quality Control Board.					
g) Place housing within a 100-year flood				✓	7

<i>Issues</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Information Sources</i>
hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?					
No housing will be constructed by the project.					
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				✓	7
The structures used in this project are used to regulate the flow of brines in and out of a single salt pond. These structures do not function to impede or redirect flood flows.					
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				✓	1,7
No levees or dams will be constructed. The project will not result in any downstream flooding.					
j) Inundation by seiche, tsunami, or mudflow?				✓	22
N/A					

FINDINGS: The project will operate under permit conditions set forth and approved by the Regional Water Quality Board. Reduction in impacts will be implemented through compliance with RWQCB permit conditions.

Hydrodynamic modeling of the Initial Release Period and Continuous Circulation Period was used to analyze the potential concentrations of dissolved oxygen, chemical contaminants, sediments, heavy metals and salinity in the pond discharge and receiving waters. The results of this evaluation indicate that none of these factors are expected to exceed water quality objectives.

MITIGATION MEASURES: The project will operate under permit conditions set forth and approved by the Regional Water Quality Control Board, including a water quality monitoring plan for the Initial Release Period and Continuous Circulation Period. Water quality elements to be monitored include: dissolved oxygen, pH, salinity, metals and temperature.

Prior to and during the Initial Release Period, water quality will be monitored in Pond A18 to determine the dissolved oxygen (D.O.), pH, temperature, and salinity of the water to be discharged. Measurements will be made in the receiving waters (i.e., Artesian Slough and/or Coyote Slough) to determine the D.O., pH, temperature, and salinity of these waters when the Initial Release is occurring. Sediment samples will be collected from the receiving water bodies at three time points (i.e., prior to, during, and after the Initial Release Period) to determine benthic community structure.

During Continuous Circulation, water quality will be monitored in the receiving waters on a monthly basis from May through October, upstream and downstream from the discharge point. Water quality will be monitored at the discharge point on a continuous basis (using a continuous monitoring device) from May through October. Metals will be monitored on an annual basis at the discharge point.

<i>Issues</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Information Sources</i>
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IX. LAND USE AND PLANNING – Would the project:

a) Physically divide an established community?				✓	1,32
The project is located within open space and will remain open space.					
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				✓	1,19
The project is in compliance with the Bay Plan policy on water surface and volumes, which states, in part, that “the surface area of the Bay and the total volume of water should be kept as large as possible in order to maximize active oxygen interchange, vigorous circulation, and effective tidal action.” In addition, the Bay Plan policy on salt ponds states that if “the owner of the salt ponds or the owner of any managed wetland desires to withdraw any of these ponds or marshes from their present uses, the public should make every effort to buy these lands, breach existing dikes, and reopen these area to the Bay.” The project will result in a reduction of salinity levels in the pond to ambient Bay levels and will result in public ownership.					
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				✓	19,33
There are no adopted habitat or community conservation plans which include the project area.					

FINDINGS: The project is in compliance with the Bay Plan policy on water surface and volumes.

MITIGATION MEASURES: None required.

X. MINERAL RESOURCES – Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?			✓		20,22,32
The commercial production of salt in Pond A18 would cease as a result of this project.					
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?			✓		20,22,32
The project site is not listed on any general plans or other land use plans as an important mineral resource.					

FINDINGS: The commercial production of salt in Pond A18 will cease whether or not this project occurs due to the transformation of nearby salt ponds under the FWS ISP and disengagement of Pond A18 from the salt production system.

<i>Issues</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Information Sources</i>
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MITIGATION MEASURES: None required.

XI. NOISE – Would the project:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?				✓	10,32
No excessive noise will occur as a result of the project.					
b) Exposure of persons to or generation of excessive groundborn vibration or groundborn noise levels?				✓	32
The project will not generate any groundborn noise.					
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				✓	10,22,32
The project will not generate any long-term operational noise.					
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?				✓	10,32
The project will not generate temporary noise.					
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				✓	1,10,22,32
The project area is not within an airport land use plan or within two miles of an airport.					
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				✓	1,10,22,32
No private airstrips are within the vicinity of the project. No excessive noise will occur as a result of this project.					

FINDINGS: No excessive noise will occur as a result of the project. The project will not generate any groundborn noise, long-term operational noise, or temporary noise. The project area is not within an airport land use plan or within two miles of an airport. Moffett Federal Airfield, a federal government facility, is approximately 5 miles southwest of the project site.

<i>Issues</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Information Sources</i>
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MITIGATION MEASURES: None required.

XII. POPULATION AND HOUSING – Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				✓	1
The project does not include any residential or commercial development.					
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				✓	1
No existing housing is present in the project area.					
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				✓	1
No existing housing is present in the project area.					

FINDINGS: The project does not include any residential or commercial development, nor is there any existing house present in the project area.

MITIGATION MEASURES: None required.

XIII. PUBLIC SERVICES – Would the project:

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				✓	1,16
Fire protection? None will be required as a result of the project.				✓	17
Police protection? None will be required as a result of the project.				✓	17
Schools? None will be required as a result of the project.				✓	1
Parks? None will be required as a result of the project.				✓	1

<i>Issues</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Information Sources</i>
Other public facilities? None will be required as a result of the project.				✓	1,16

FINDINGS: No new public facilities will be required as a result of this project.

MITIGATION MEASURES: None required.

XIV. RECREATION – Would the project:

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				✓	1,22
The project will not increase use of existing parks.					
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				✓	32
The project does not include recreation facilities or involve the construction or expansion of any such facilities.					

FINDINGS: The project will not increase the use of existing parks, nor does it include the construction or expansion of any recreational facilities.

MITIGATION MEASURES: None required.

XV. TRANSPORTATION/TRAFFIC – Would the project:

a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?				✓	1,32
No increase in traffic will result from the project.					
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?				✓	1,32
No level of service standard will be exceeded by the project.					
c) Result in a change in air traffic patterns, including either an increase in traffic levels				✓	32

<i>Issues</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Information Sources</i>
or a change in location that results in substantial safety risks?					
No air traffic patterns will be altered by the project.					
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				✓	32
No hazards will be created or increased.					
e) Result in inadequate emergency access?				✓	32
No emergency access will be required as a result of the project nor will the project obstruct existing emergency access.					
f) Result in inadequate parking capacity?				✓	32
No increases in parking demand will occur as a result of the project.					
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				✓	1,32
No alternative transportation will be affected by the project.					

FINDINGS: No increase in traffic, hazards, or parking demand will result from the project. No level of service standard will be exceeded by the project. No air traffic patterns will be altered by the project. No emergency access will be required as a result of the project. No alternative transportation will be affected by the project.

MITIGATION MEASURES: None required.

XVI. UTILITIES AND SERVICE SYSTEMS – Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				✓	12,32
No wastewater requiring treatment will be generated by the project.					
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				✓	12,18,32
No wastewater requiring treatment will be generated by the project.					
c) Require or result in the construction of new storm water drainage facilities or				✓	12,18,32

<i>Issues</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Information Sources</i>
expansion of existing facilities, the construction of which could cause significant environmental effects?					
No new sources of storm water will be generated by the project					
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				✓	12,18,32
No potable water will be required by the project					
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				✓	12,18,32
No wastewater requiring treatment will be generated by the project					
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?				✓	12,18,32
No waste will be generated by the implementation of this project.					
g) Comply with federal, state, and local statutes and regulations related to solid waste?				✓	12,18,32
No solid waste will be generated by the implementation of this project.					

FINDINGS: No wastewater requiring treatment will be generated by the project. No new sources of stormwater or solid waste will be generated by the project.

MITIGATION MEASURES: None required.

XVII. MANDATORY FINDINGS OF SIGNIFICANCE

a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?			✓		8,19,21,22,23,24,25,26,27,28,29,30,31,32,33
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<i>Issues</i>	<i>Potentially Significant Impact</i>	<i>Less Than Significant with Mitigation Incorporation</i>	<i>Less Than Significant Impact</i>	<i>No Impact</i>	<i>Information Sources</i>
The project will result in changes in pond hydrology and salinity that will result in wildlife habitat changes with positive impacts for some wildlife species and negative impacts for others. No short or long-term significant impacts are expected. The project will not affect the number or restrict the range of any endangered plant or animal and will not affect any examples of California history or prehistory.					
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?			✓		8,19,21,22, 23,24,25,26, 27,28,29,30, 31,32,33
The cumulative impacts of the project are considered positive for fish and wildlife species. Adjacent U.S. Fish and Wildlife Service ISP ponds A17 and A16 will be operated in a manner similar to the A18 Pond Management Plan whereby bay water will be circulated through the ponds and discharged in to the Bay. The remainder of the ISP ponds in the South Bay may be restored by the Service to tidal marsh habitat or maintained as open water habitat. The A18 management project will contribute to the open water habitat available in the vicinity of the U.S. Fish and Wildlife Service South Bay ISP ponds.					
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?				✓	1,7,8,9,10, 11,12,16,17, 18,32
The project is not expected to generate any adverse environmental impacts which might affect humans in the vicinity.					

SUMMARY–INITIAL STUDY FOR A18 POND MANAGEMENT PLAN

SUMMARY OF FINDINGS: The project will result in changes in pond hydrology and salinity within the pond and short-term changes in salinity in the receiving waters. The discharge will be permitted under conditions set forth by the RWQCB and will include regular monitoring of water quality conditions. Reduction of pond salinity levels to approximately 44 ppt will result in a decrease in invertebrate foraging opportunities for high-salinity salt pond bird communities and an increase in invertebrate prey diversity and foraging opportunities for typical San Francisco Bay waterbird communities. No long-term significant impacts are expected to biological resources at the project site. The project is not expected to generate any adverse environmental impacts which might affect humans in the vicinity.

SUMMARY OF MITIGATION MEASURES: The proposed initial project release and continuous circulation conditions have been planned to incorporate mitigation measures (e.g. timing, location, and rate of discharge) to reduce impacts to less than significant levels. However, the following mitigation measures will be implemented in order to ensure that the discharge and pond water parameters are within the range predicted by the hydrodynamic computer modeling.

III-E. Objectionable Odors

Objectionable odors created by the project are not expected to occur. However, in order to monitor odor conditions at the pond and identify when odors are generated due to unforeseen circumstances, hydrogen sulfide monitor cards can be placed at the periphery of the pond. Past experience with these cards has proved them to be useful, though not necessarily definitive. These cards turn black when exposed to

hydrogen sulfide gas. If hydrogen sulfide gas odors result from biomass decaying in stagnant waters or depths fall to such a level as to expose pond bottoms, circulation will be increased through the pond or water levels raised by closing the outlet gate.

IV-A.1. Biological Resources

In order to ensure that potential impacts to special status or sensitive species remain less than significant, water quality conditions will be monitored according to a plan approved by the RWQCB (See Measure VIII-A). Monitoring of Pond A18 water quality will ensure that any unforeseen changes in pond conditions and discharge are addressed through either closure of tidal gates or altering the release scenario to a north initial release as described in the project description.

IV-A.2. Waterbird Use and Avian Botulism

Waterbird use of the pond will continue to be monitored to provide data on waterbird use as it relates to changing salinity conditions within the pond and monitor for signs of avian botulism. Avian botulism will be managed by maintaining or increasing circulation through ponds, keeping salinity at or above sea water concentrations, and disposing of carcasses.

VIII-A. Water Quality

The project will operate under permit conditions set forth and approved by the Regional Water Quality Control Board, including a water quality monitoring plan for the Initial Release Period and Continuous Circulation Period. Water quality elements to be monitored include: dissolved oxygen, pH, salinity, and temperature.

Prior to and during the Initial Release Period, water quality will be monitored in Pond A18 to determine the dissolved oxygen (D.O.), pH, temperature, and salinity of the water to be discharged. Measurements will be made in the receiving waters (i.e., Artesian Slough and/or Coyote Slough) to determine the D.O., pH, temperature, and salinity of these waters when the Initial Release is occurring. Sediment samples will be collected from the receiving water bodies at three time points (i.e., prior to, during, and after the Initial Release Period) to determine benthic community structure.

During Continuous Circulation, water quality will be monitored in the receiving waters on a monthly basis from May through October, upstream and downstream from the discharge point. Water quality will be monitored at the discharge point on a continuous basis (using a continuous monitoring device) from May through October. Metals will be monitored on an annual basis at the discharge point. In the event that water quality conditions exceed objectives, the outlet gates may be closed until water quality conditions have returned to acceptable levels.

V. CHECKLIST REFERENCES

1. San Jose 2020 General Plan
2. USDA, Soil Conservation Service, Soil Survey of Santa Clara County, August 1968
3. USDA, Soil Conservation Service, Important Farmlands of SC County map, June 1979
4. State of California's Geo-Hazard maps/Alquist Priolo Fault maps
5. San Jose Historic Resources Inventory
6. City of San Jose Archeological Sensitivity Maps
7. FEMA Flood Insurance Rate Map, Santa Clara County 1986
8. California Department of Fish & Game, California Natural Diversity Database, 2004
9. California Environmental Protection Agency Hazardous Waste and Substances Sites List, 1998
10. City of San Jose Noise Exposure Map for the 2020 General Plan
11. BAAQMD CEQA Guidelines, Bay Area Air Quality Management District. April, revised 1999.
12. San Francisco Bay Regional Water Quality Control Board 1995 Basin Plan
13. Final Environmental Impact Report, City of San Jose, SJ 2020 General Plan
14. Santa Clara Valley Water District
15. City of San Jose Title 20 Zoning Ordinance
16. San Jose Department of Public Works
17. San Jose Fire Department
18. San Jose Environmental Services Department
19. BCDC San Francisco Bay Plan
20. California Division of Mines and Geology
21. Site inspection of pond A18 by WRA, Inc.
22. Knowledge of the area through online databases and maps
23. Teri Peterson, Cargill Inc
24. Evaluation of the Potential for Impacts on Salmonid Migration Associated with Circulation of Saline Pond Water from Pond A18, Steve Hansen, S.R. Hansen & Associates
25. Evaluation of the Potential for Impacts to Aquatic Life due to the Presence of Heavy Metals in the Saline Pond Water Circulated from Pond A18. Steve Hansen, S.R. Hansen & Associates
26. Potential Impacts and Minimization and Mitigation Measures, Kirk Wheeler, Shaaf & Wheeler Consulting Civil Engineers
27. Cheryl Strong, San Francisco Bay Bird Observatory (SFBBO)
28. Avian Community Study at Pond A18, WRA, Inc.
29. Evaluation of the Potential for Salinity Impacts on Bay Shrimp Associated with Circulation of Saline Pond Water From Pond A18. Steve Hansen, S.R. Hansen & Associates³⁰.
30. Evaluation of the Potential for Reductions in Dissolved Oxygen Associated with Circulation of Saline Water From Pond A18. Steve Hansen, S.R. Hansen & Associates
31. Water and Sediment Quality Sample Report: Cargill Salt Ponds-South Bay, Hydro Science Engineers)
32. Detailed Project Description
33. Environmental Setting-Biological Resources
34. Sediment Characterization (including summary of Tetra Tech 2002 report)-Kirk Wheeler, Schaaf & Wheeler Consulting Civil Engineers